

## ABSTRACT

A potentiometric sensor for wellbore applications having a  
5 permanent aqueous contact between measuring and reference  
electrode, whereby contact is ensured by discharging the  
internal solution from the reference electrode directly onto a  
measuring (ion-sensitive) membrane and protecting the reference  
junction of the reference electrode with water wet porous  
10 material, such as sintered glass. It is advantageously applied  
to oil-water mixtures under high pressure and/or temperature.

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